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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,426	08/07/2000	Robert H. Zimmer	03187-P0006B	3123

7590 07/01/2004

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EXAMINER	
YU, GINA C	

ART UNIT	PAPER NUMBER
1617	

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/844,426	ZIMMER, ROBERT H.	
	Examiner	Art Unit	
	Gina C. Yu	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *December 10, 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-4,6 and 8-20* is/are pending in the application.

4a) Of the above claim(s) *8-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-4, 6, 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Receipt is acknowledged of Amendment filed December 10, 2003. Claims 2-4, 6, and 8-20 are pending, of which claims 8-16 have been withdrawn from consideration. Obvious double patenting rejection as indicated in the previous Office action dated September 9, 2003, is withdrawn in view of terminal disclaimer filed December 10, 2003. Claim rejections made under 35 U.S.C. § 112, second paragraph, as indicated in the same Office action, are withdrawn in view of claim amendment, and new rejection is made. Claim rejection made under 35 U.S.C. § 102(e) as indicated in the same Office action is withdrawn in view of applicants' remarks. Claim rejection made under 35 U.S.C. § 103 (a) are withdrawn to address the claim amendment, but the substance of the claim rejection is maintained for the reasons of the record and as explained below.

Terminal Disclaimer

The terminal disclaimer filed on December 10, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of copending application no. 10/237,254 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-4, 6, and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "substantially" in claims 19 and 20 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The remaining claims are rejected as depending on indefinite base claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-4, 6, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldstein (US4396606) in view of Bundguaard et al. (US 4694006) ("Bundguaard").

Goldstein teaches opioid compounds having a phenolic hydroxyl linked to polypeptide with at least one amino acid. The reference teaches met-enkephalin and teaches that there has been substantial activity in trying to develop modifications of the compound to enhance the activity. See col. 1, lines 13 – 17.

The Goldstein reference fails to teach the carrier moiety of the instant claims.

Bundgaard teaches methods for preparing the prodrug form of allopurinol and thereby to provide improved aqueous solubility and oral administration compared to the parent compound. See col. 1, line 6 – col. 2, line 47. The reference teaches that

alcyl groups such as benzoyl and cinnamoyl are well known carrier moieties. See col. 5, line 66 – col. 7, line 54; col. 10, line 60- col. 11, line 18.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the opiod of Godstein by linking with acyl groups such as cinnamoyl or benzoyl because of the expectation of successfully producing a prodrug of met-enkephalin for improved solubility and oral administration.

Response to Arguments

Applicant's arguments filed December 10, 2003 have been fully considered but they are not persuasive in part.

Applicants argue that the combination of Goldstein and Bundgaard fails to teach the claimed prodrug. Specifically, applicants assert that the cinnamoyl and benzoyl carrier moieties in Bundgaard are not the most preferred compounds in the reference. It is well known in patent law a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 U.S.P.Q. 2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). It is also held that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. The court in In re Susi also held that "a known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." See 440 F.2d 442, 169 U.S.P.Q. 423 (C.C.P.A. 1971). In this case, using cinnamoyl and benzoyl carrier moieties to make a prodrug cannot be a patentable simply because the prior art prefers other moieties. It is true that the drug used in Bundgaard is not

the same or similar to the polypeptide of Goldstein. However, the function of the cinnamoyl and benzoyl carrier to enhance bioavilability of a drug is taught in the Bundgaard reference.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the fact that the polypeptide drug and cinnamoyl and benzoyl carriers as moieties for prodrugs are found in the cited references only. The rejection is solely based on the teachings of the references and not improper hindsight reasoning.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory

action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina C. Yu whose telephone number is 571-272-0635. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gina Yu
Patent Examiner

6/25/09

SREENI PADMANABHAN
SUPERVISORY PATENT EXAMINER